

## **REMARKS/ARGUMENTS**

Reexamination of the captioned application is respectfully requested.

### **A. PATENTABILITY OF THE CLAIMS**

Claims 1 – 4, 7 – 10 and 12 - 15 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 5,973,638 to Robbins in view of U.S. Patent 4,119,638 to Fletcher. Claims 5 – 6 and 11 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 5,973,638 to Robbins in view of U.S. Patent 4,119,638 to Fletcher, as applied to claims 1 and 7 and further in view of U.S. Patent 6,351,243 to Derneryd. All prior art rejections are respectfully traversed for at least the following reasons.

Each of independent claims 1, 7, and 13 , concern an antenna comprising a number of antenna elements that are used during reception of a signal from a target. All antenna elements are used for producing a radiation diagram according to known techniques. At other times in a time sequence, t1, t2 t3, etc, the number of antenna elements is reduced for each point in time (t1, t2, t3, etc). Each time the antenna elements are reduced, a different radiation diagram is generated and stored, with different amplitudes of the main lobe and of the side lobes. The maximum point is found in a first radiation diagram and then used in a consecutive radiation diagram in order to allow "zooming" (e.g., where intermediately positioned antenna elements are turned off with increased side lobes as a consequence). The ultimate zoom is achieved with only the outermost antenna elements remaining (*see*, for example Fig. 4 and Fig. 5).

Applicant's claims require a sequence of operations, with different operations of the sequence involving different numbers of antenna elements, and values from radiation diagrams of one operation being used as evaluation criteria for radiation diagrams of another operation of the sequence, all for the purpose of measuring accuracy of the

antenna array. As an illustration, “first values” obtained from a first radiation diagram of a first operation of the sequence (an operation such as act a) of claim 1 which uses, e.g., “all” antenna elements) are used as criteria for a first range in evaluating a second radiation diagram for a second operation of the sequence (an operation in which an antenna is switched off or reduced). For example, the “first values” of the first operation are used to reject certain values (all values outside the first range) in the second radiation diagram (in order, e.g., to reject first range grating lobes in the second radiation diagram. And yet a value from the second operation (e.g., a maximum point for the “second values” obtained from the second operation) is also used for measuring accuracy of the antenna array.

One cannot arrive at the subject matter of Applicant’s independent claims by merely reading U.S. Patent 5,973,638 to Robbins and being aware that signals from different antenna elements can be summed over time. This information gives neither direct nor indirect information that would lead a person skilled in the art to arrive at the subject matter of the independent claims. On the contrary, from U.S. Patent 5,973,638 to Robbins the person skilled in the art would obtain a radiation diagram by summing over time. Furthermore, Robbins does not teach that any of the antenna elements are supposed to be turned off in order to create a different radiation diagram or to save the different radiation diagrams for allowing a stepwise and sequenced calculation over plural operations.

Thus, a person skilled in the art would not arrive at Applicant’s independent claims 1, 7, and 13 from U.S. Patent 5,973,638 to Robbins since Robbins teaches that radiation diagrams should be summed instead of being treated separately. Moreover, as the office action appears to appreciate, Robbins does not turn off an antenna element nor does Robbins give any reason for turning off an antenna element.

The office action attempts to remedy the deficiencies of U.S. Patent 5,973,638 to Robbins with U.S. Patent 4,119,638 to Fletcher. Even if Fletcher were to be construed as teaching turning off an antenna element, the Fletcher turn off would be for an entirely different purpose: change of phase increment. If Fletcher teaches that antenna elements can be switched on and turned off, it is only to change phase increment. Fletcher is completely silent about any type of zooming or result which is achieved by stepwise turning off one element and storing the radiation diagram and performing the actions such as stated in Applicants' independent claims.

Moreover, the purported Robbins/Fletcher combination, which has no motivation, fails to teach or suggest a stepwise or sequential process of changing a number of operative antenna elements and using a value obtained from a radiation diagram of one operation to calculate or determine a value for interpreting or affecting a radiation diagram of another operation involving a different number of operative antennas.

Consequently, even if Robbins and Fletcher were assumed *arguendo* to be properly combineable, a person skilled in the art would combine Robbins and Fletcher only to sum all signals over time and change phase increment. Numerous claim limitations, including those of "using" values from the different radiation diagrams, are neither taught nor suggested by either applied reference, alone or in combination.

As explained previously, U.S. Patent 6,351,243 to Derneryd teaches that an antenna array in which the antenna elements are positioned in a selected pattern in order to minimize side lobes (col 2, lines 35-61). Hence, Derneryd concerns another solution to a side lobe problem. Derneryd does not teach that the antenna elements can be turned off in order to get different radiation patterns. Therefore, Derneryd does not rehabilitate the deficiencies of the other applied references.

**B. REPEATED REQUEST ACKNOWLEDGEMENT OF THE CLAIM FOR PRIORITY**

Applicant again respectfully requests the Examiner to acknowledge receipt of the priority document and the priority claim.

**C. INFORMATION DISCLOSURE STATEMENT**

Applicant requests that the examiner consider and cite the references listed in the Information Disclosure Statement (IDS) filed on August 20, 2007 (and which was filed after the mailing of the August 1, 2007 office action.

**D. MISCELLANEOUS**

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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